

## A B S T R A C T

A method for the removal of a substance carrying a negative charge and being present in an aqueous liquid (I). The method comprises the steps of: (i) contacting the liquid with a matrix carrying a plurality of ligands comprising a positively charged structure and a hydrophobic structure, and (ii) desorbing the substance. The characterizing feature is that

(I) each of said ligands together with a spacer has the formula:



where

10 (A)  $[Ar-R_1-N^+(R_2R_3R_4)]$  represents a ligand

a) Ar is an aromatic ring,

b)  $R_1$  is  $[(L)_nR'_1]_m$  where

- n and m are integers selected amongst zero or 1;
- L is amino nitrogen, ether oxygen or thioether sulphur;

15 •  $R'_1$  is a linker selected among

1) hydrocarbon groups;

2)  $-C(=NH)-$ ;

c)  $R_{2-4}$  are selected among hydrogen and alkyls;

(B) SP is a spacer providing a carbon or a heteroatom directly attached to  $Ar-R_1-N^+(R_2R_3R_4)$ ;

(C) --- represents that SP replaces a hydrogen in  $(Ar-R_1-N^+(R_2R_3R_4))$ ;

(D) -- represents binding to the matrix; and

(II) desorption.

25 There is also described (a) anion-exchangerrrs having high breakthrough capacities, (b) a screening method and (c) a desalting protocol.